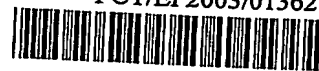


Translation

10/535120
PATENT COOPERATION TREATY

PCT/EP2003/013621



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 0000054125	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/013621	International filing date (day/month/year) 03 December 2003 (03.12.2003)	Priority date (day/month/year) 06 December 2002 (06.12.2002)
International Patent Classification (IPC) or national classification and IPC C07C 51/47		
Applicant BASF AKTIENGESELLSCHAFT		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 15 June 2004 (15.06.2004)	Date of completion of this report 26 August 2005 (26.08.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/013621

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
 pages _____ 1-8 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the claims:
 pages _____ 1-14 _____, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 _____, filed with the letter of _____
- ☐ the drawings:
 pages _____, as originally filed
 pages _____, filed with the demand
 _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-14	YES
	Claims		NO
Inventive step (IS)	Claims	1-13	YES
	Claims	14	NO
Industrial applicability (IA)	Claims	1-14	YES
	Claims		NO

2. Citations and explanations

The numbering (D1, D2) used for the searched prior art documents corresponds to the order in which they are listed in the international search report.)

The closest prior art, D1 (abstract), describes very generally the simple and reliable removal of polymerization inhibitors, which are not described in more detail, from various vinyl monomer systems, *inter alia* by adsorption, and mentions *inter alia* also activated carbon in a series of possible absorbents.

In relation thereto, the method claimed in the present application differs by the specification of a combination of particular method parameters:

method for the reduction of the concentration of methoxyhydroquinone (MEHQ) in acrylic acid, which is neutralized up to 75% to 105%, by the continual adsorption of activated carbon.

This combination of features cannot be derived from D1 or any of the other (published) documents D2 to D5 cited in the search report, and the subjects of the present claims 1 to 14 are therefore novel (PCT Article 33(2)).

Furthermore, D1 is not constituted in such a way that it could have readily led a person skilled in the art to the claimed specific procedure. This is even more so the case since surprisingly advantageous adsorption conditions were found, in a limited range, with the procedure according to the invention (see page 6 of the description, page 2).

The claimed method is also not obvious from the combination with D2. D2 describes namely *inter alia* the removal of hydroquinone or quinone derivatives from vinylic compounds, including *inter alia* acrylic acid (column 3, line 13); however, said polymerization inhibitors should have at least three rings (claim 1). In particular D2 also does not hint at the relevance of the neutralization degree of acrylic acid as the medium to be purified.

The prior art described in D3 to D5 is even more remote.

The claimed method of reducing the concentration of MEHQ can therefore be regarded as involving an inventive step (PCT Article 33(3)).

This applies correspondingly also to the method of producing superabsorbers (claim 13), which method is characterized substantially by the method of reducing the MEHQ concentration included therein.

The use of 'superabsorbers', whether yellow or colorless, is already basically known in the hygiene industry for producing various types of diapers and pads (see the introductory part of the present description). It is therefore not discernible how this *per se* known method according to the present claim 14 could substantiate the required inventive step, especially since a 'surprising' effect associated with the use is not discernible.

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There are no objections regarding the industrial applicability (PCT Article 33(4)) of the claimed subject matter.